P.L.&R.
stage
D
, N.Y.
o. 1640

Vol. No. 25

October

LE CHI
DENT
OU
TRAITE' DES DE

OU L'ON ENSEIGNE LES MO
de les entretenir propres & saines, de l
embellir, d'en réparer la perte & de re-
medier à leurs maladies, à celles des Gen-
cives & aux accidens qui peuvent survenir
aux autres parties voisines des Dents.

Avec des Observations & des Reflexions sur
plusieurs cas singuliers.

Ouvrage enrichi de quarante Planches en taille douce.

Par PIERRE FAUCHARD, Chirurgien Dentiste à Paris.

TOME PREMIER.

A PARIS,

Chez JEAN MARIETTE, ruë Sain
aux Colonnes d'Hercule

M. DCCXXV

Avec Approbations &

1955

DENTISTRY

1th CNUY

Barbosh

Dear Doctor,

Everyone is talking about the growth of high fidelity recorded music and voice. "Orthophonics" and "Full dimensional sound" are household words these days.

"Hi-Fi" or high fidelity results from improvement in recording techniques and better reproduction through the use of new materials.

Recordings don't sound as though they were being heard through a closed door. Modern equipment and materials opened that door and the results are magnificent.

Our laboratory uses the most modern materials and equipment to reproduce your original impression. We deliver a final Ticonium casting that is a perfect duplicate—every time.

All our Ticonium cases are made lighter, brighter through the use of an all-electric, modern, technique.

Let us reproduce your next case for you.

Sincerely,

YOUR Ticonium LABORATORY

tic

Published monthly by TICONIUM
413 N. Pearl St., Albany 1, N. Y.

Copyright, 1955, Ticonium

Annual subscription, $2.50

EDITOR, Joseph Strack

CONTRIBUTING EDITORS
Arthur H. Levine, D.D.S.
Joseph Murray, D.D.S.

A MAGAZINE FOR DENTISTS, DENTAL ASSISTANTS, AND DENTAL HYGIENISTS

October 1955, Vol. XIV, No. 10

CONTENTS

IMMEDIATE RESTORATIONS IN 1939—AND NOW
"There is little doubt that an immediate (restoration) is a splendid thing for the patient" 1

THE NEW ESTHETIC LOOK IN DENTURES
"Dentists can now provide patients with dental plates and bridges which blend with the natural colors in the mouth." 4

WHAT'S NEW? THIS!
Exclusive information on new patents covering inventions of interest to dentists 6

ANGLES AND IMPRESSIONS
A classic piece of satire by a master: How to Be a Successful Dentist 7

DENTISTRY IN THE 18th CENTURY
Another fascinating installment in TIC's great historical series 8

DENTAL WIVES
Some refreshing commentary on *How to Help Your Husband Get Ahead* 10

OPERATIVE DENTISTRY
Another fruitful article in a stimulating feature prepared especially for TIC's readers 11

THE ARMY DENTAL CORPS
The first chapter in a series on the "most extensive adult-patient dental service in the country." 14

Opinions expressed by contributors to TIC magazine do not necessarily reflect the views of the publishers

Printed in U. S. A. by
Jersey Printing Co., Inc.
Bayonne, New Jersey

Cover artist, Edward Kasper

Immediate Restorations In 1939—And Now

by William S. Warren, D.D.S.

The other day I happened to re-read a paper written in 1939, entitled "Physiological Advantages of Immediate Restorations," which I delivered that year before the alumni of the University of Southern California College of Dentistry.

At that time very few dentists were making immediate restorations. Today, in most of the cases where I extract anterior teeth, the dentist has an immediate constructed and ready to place.

However, it is amazing to discover how very few changes have been made in immediate restorations during the past sixteen years, especially in the surgical procedure. The statements made in that speech are practically as true today as they were in 1939, and for several years before that date.

The main changes have come in the prosthetic field. Dentists have far more precision today, and impression materials have greatly improved. Laboratory technicians have greater skill, aided by the more accurate equipment with which they work.

A successful immediate restoration is a splendid example of teamwork between the dentist, the oral surgeon, the laboratory technician, and the patient. It requires patience, coordination, and understanding.

The oral surgeon has to know the dentist with whom he is cooperating, and how much bone he wishes removed. The laboratory technician is required to carry out perfectly his part of the procedure. It is seldom these days that it is necessary for an oral surgeon to send the patient back to the dentist for adjustment of a denture. Usually it is a pleasure for him to observe the beautiful precision of the work of both the prosthetic dentist and the technician as he inserts the denture into the patient's mouth.

A prosthetic dentist, in the making of an immediate, is more than an architect and construction expert, for he constructs something to replace an old building before that building is demolished.

The oral surgeon is more or less the wrecking crew responsible for taking out the old building while still leaving the foundation for the rebuilding. When the oral surgeon takes out the necessary teeth he tries to leave just as much foundation as possible for the prosthodontist to build upon. Every dentist has his own tech-

nique, and it is up to the oral surgeon to cooperate to the fullest with him.

There is little doubt that an immediate is a splendid thing for the patient from a physiological, psychological, and esthetic viewpoint. This was true sixteen or more years ago, and it is more than ever true today. It might be of general interest to glance at that paper, dated February 6, 1939, and see the dental viewpoint on immediate restorations at that time, for comparison with the opinion today.

> An immediate restoration is one that is completely constructed before the final extractions and is inserted at that time. In some instances, it is of temporary nature and in others it may function in a satisfactory manner for several years.
>
> This type of reconstructive dentistry gives to the patient several physiological advantages during the transition period between natural and artificial dentures. There are also advantages relating to the prosthetic dentist as well as some advantage to the exodontist.
>
> From the patient's standpoint, this type of procedure has many favorable attributes. Immediate denture patients have a better mental attitude about the whole situation. They submit to the surgical procedure in a more kindly manner when they know there will not be the embarrassment of being without anterior teeth. Immediate denture patients suffer far less loss of time from business and social activities as compared to other methods. The normal diet of the patient is less changed, as the new denture will usually function on the softer foods.
>
> The diet factor has a very important bearing on the patient's physiological condition, and so we can expect better local as well as general results, when the immediate dentures are constructed. The patient has an easier time from a post-operative standpoint as the denture protects the injured area from irritation, and there is no discomfort in the tempro-mandibular articulation caused by a change in the normal bite.
>
> The advantages of immediate restorations to the prosthetic dentist are numerous and, from observation of this type of dentistry performed by dentists, the exodontist appreciates the fact that more accuracy is maintained in the final result. There is less chance of error in maintaining normal occlusion in the construction of artificial dentures as all normal conditions can be measured and so transposed to the artificial restorations.
>
> There is no change in the action of the tempro-mandibular articulation and the centric bite is maintained correctly, all of which is difficult and hard to restore if lost. The constant stimulation to the tissues by the immediate restoration brings an earlier and better foundation for denture comfort. Muscle tone is retained in the muscles of mastication and facial muscles preventing sunken cheeks, flabbiness, and such changes in the patient's expression.
>
> Individual teeth can be placed in the denture as they were in the natural state, irregularities, stains, small fillings can all be reproduced, and the patient's appearance unaltered. In abnormal occlusion, the exact amount of malocclusion can be measured and the degree of surgical intervention necessary to bring about a normal occlusion and facial contour decided upon with accuracy.
>
> Since the use of hydro-colloidal impression material has been perfected, there seems to be greater accuracy in the immediate restoration, and much less denture adjustment necessary at the time the denture is placed. This creates less trauma and a better post-operative result takes place.
>
> From a surgical point of view, while more of the exodontist's time is consumed in this type of practise, there is sufficient advantage to compensate for the extra effort. Surgical shock is reduced, as the number of teeth removed at a sitting is planned in easy stages, and there is seldom any untoward result to the patient. There is less pain and discomfort following extraction when immediate dentures are placed, as the denture acts as a splint or bandage would on any injured part.
>
> The injured area is protected against irritation from foods, thermal changes, opposing teeth, the tongue, cheek, etc., which results in more local comfort to the patient. As the tempro-mandibular articulation is not changed, there is no resulting discomfort in the muscles of mastication, or the articular ligaments, which produces a post-operative complaint of pain in and around the ear. Abnormal muscles attach-

DENTIST IN THE NEWS

GRADUATE AND FAMILY—Kevin W. Toal, twenty-nine, with his wife and seven children after receiving his Doctor of Dental Surgery degree from St. Louis University. He worked his way through six years at the school. (Wide World Photos)

ments and labial frenum can be adjusted without sutures as the immediate denture will hold them in the position desired.

There is less post-operative hemorrhage as the pressure factor induced by the immediate placement of the denture arrests bleeding. In the care of patients with a tendency toward anemia, hyper-tension or abnormal bleeding and clotting time, this mechanical factor is an advantage in the control of bleeding.

The chance of post-operative infection does not seem to be any greater than where immediate dentures are not used, but in this type of dentistry the pre-operative condition of the oral cavity should be as free of all infection as possible. Acute or sub-acute periapical infections, facial cellulitis, as well as gingival or sub-gingival inflammations, Vincent's particularly, should be corrected before the extraction and placement of the denture.

The most common unpleasant after-effect in this type of procedure is greater edema, which is caused by more surgical trauma and the pressure exerted by the denture on the soft tissues. The immediate denture by its mechanical arresting of normal bleeding will, in some instances, cause an extravisation of blood into the facial tissues. The resulting ecchymosis at times being of a magnitude embarrassing to both patient and operator.

When the surgical part of immediate restorations is referred, the exodontist, patient and prosthodontist are all aided by mutual cooperation. The most satisfactory result happens when the prosthetic dentist is present at the time the denture is placed. The exodontist will be able to give better service to all concerned if the patient's dentist is present at the time of the final extractions, the denture is at hand to try in, plaster casts of the original dentition, and also the cast from which the artificial dentures are constructed. This gives the exodontist some conception of the amount of alveolar bone that is to be removed so that the denture will go into place.

A transparent base plate made either from sheet celluloid, or the ordinary base plate material, with the area of operation cut out and replaced by thin transparent wax, will give the surgeon a visual check on where the necessary alveolectomy is required. If the prosthodontist is present during the extractions, his ideas and suggestions can be given to the exodontist and he can make such peripheral and occlusal adjustments as are necessary before the final blood clot is formed.

Most operators favor local anesthesia for this type of surgery because a local anesthetic is considered safer where time is a factor. Even highly nervous patients can be operated with local anesthesia if they are premedicated, and under local anesthesia there are no interfering factors present such as a nasal inhaler, throat packing, or mouth prop to interfere with the trying in of the denture.

Immediate post-operative x-ray and a subsequent x-ray made in four to six months will give good indication of the individual's calcium metabolism and any dietary deficiencies supplemented to aid in the control of future alveolar resorption.

HAPHAZARD DENTISTRY

Last night I had a jolly dream—
A gay dream, I declare!
The pumpkin people came, abeam,
And climbed into my chair!

My fame had got around a bit,
It seems, and they were keen
To have me see their mouths and fit
Them out for Hallowe'en!

"Don't be careful, Doc!" they said.
"It doesn't hurt at all!
Jerk the jaw and twist the head;
Pry and push and maul!

Haphazard dentistry's for us!
We'll give you lots of money
Not to make us glamorous
But sinister or funny!"

Oh, what a night of it we had!
I pulled their teeth! I never
Looked to see if they were bad!
I just made mouths look clever!

One in, one out, one on a slant;
One short, one long, one jagged.
They grinned and "O-oohed" and too, I grant,
When finished, they looked ragged!

But each one claimed he liked my job
And, in windows, that same night,
I saw the whole unsightly mob
Glow at me in delight!

I woke to practice dental art
On tender nerves, gums shrunken . . .
But still I wish with all my heart
Each patient was a pumpkin!

Martin Garland

The New Esthetic Look in Dentures

by Dona Z. Meilach and Melvin M. Meilach, D.D.S.

Dentists can now provide patients with dental plates and bridges which blend with the natural colors in the mouth. With the new gum coloring processes available, it is almost impossible to detect a false set of teeth.

Instead of having monotone pink gums, the new "cosmetic dentures" duplicate the actual flesh tones of human gums. You can give each patient an individual set of teeth that is correlated with the person's own skin tones, giving the denture an "at home," non-artificial appearance.

Cosmetic dentures actually employ a camouflage principle which succeeds in hiding the false look heretofore present in false teeth. Outside the mouth a set of colored dentures will look incongruous, just as will a pheasant if he is standing out in the middle of a road. But place the pheasant in his natural surroundings of the forest and he will blend in with nature's own tones. Place the colored denture in the patient's mouth and it, too, will blend with nature's own tones. This is called nature's method of "protective coloration."

Patients have already voiced their opinions of the cosmetic dentures. One woman said, "False teeth are something I have never wanted to have admired or admit I own. My dentist made my teeth with natural defects. The fact that these dentures in no way look artificial gives me a sense of comfort and confidence whenever I open my mouth. "

A dental supply salesman recently fitted with this new denture development said, "I'm glad I sell this new material, because I'm a walking testimonial for my product. Often a dentist finds it hard to believe I'm wearing dentures unless he examines me closely."

Dentists who realize that the greatest expression of prosthetic skill is the disguise of artificiality in denture restorations will bless this new discovery. Coloring the gums will remove that "perfect" look often found in the pink monotone type. As nothing in nature is assembly-line perfect, dental prosthetics should not attain artificial perfection but rather strive to imitate the imperfections of nature. One must be constantly aware that cosmetic dentures are an improvement only esthetically and will in no way compensate for faulty workmanship. Careful restoration accompanied by individualizing the denture color will assure you of satisfied patients.

"How do I have to change my present methods of preparing dentures?" you ask. "Do I have to learn a whole new technique to give my patients the advantage of this new discovery?"

Actually, with some practice in your own laboratory you can produce customized dentures in a reasonable amount of time. Or the laboratory that processes your denture work can send them back to you already colored. There are three basic methods for coloring the gums, and the one you choose is up to you. These are the processes and we will discuss them individually.

1. Dentures come back from the laboratory and you apply the colors—called a *tissue-tinting* process.
2. The color is already scientifically blended in a gel or a plastic material before it is pressed —called a *homogeneously pigmented* process.
3. Either you or the laboratory can apply first, a wax veneer and second, a colored acrylic veneer—called a *veneering* process.

Tissue Tinting

The tissue-tinting method is accomplished by you in your laboratory. The dentist becomes an artist capable of capturing natural beauty rather than creating artificial perfection, but don't let a lack of artistic talent frighten you. The complete directions are easily followed.

With the tissue-tinting technique you order dentures made from the lab in the monotone pink material. Using a master tissue shade guide, you determine the dominating skin tone of your patient. Although human gum tissue is substantially red, there are varying concentrations of blue and yellow-orange plus variations in these ranges from light to dark that makes each patient's case just a bit different. The color kits contain these three basic colors which can be mixed to give varying hues as well as some supplementary colors of brown, violet, and grey to help with variations of light and dark.

The colors, which are made in liquid forms or powder forms ready for mixture, are semi-transparent so you are readily able to observe the ultimate color as it is being applied. Thus mistakes are infrequent and an extremely high degree of color accuracy is easily attained. Red is primarily used to develop light and dark concentrates of color. You know that tense tissue is paler than flexual or movable tissue, so you are quickly able to recognize that root eminence is lighter than the tissue between the roots with the interdental papillae somewhat darker. Muscle attachments are outlined by an even deeper red. With the use of the tissue shade guide, you know immediately whether to use a greater red, blue

or yellow-orange tone, but should additional coloring be required you can quickly evaluate this during the coloring procedure.

Dentures dry in about one hour, depending on room temperature, humidity, and so forth. Drying can be speeded up by placing the denture before a fan for twenty minutes, and experience will determine what is optimum for you. When the plastic scent is gone, the denture is usually dry and you can reduce the high glaze with a little pumice so saliva will adhere to the denture in a normal manner.

You can individualize every set of new dentures as well as any denture your patient has already worn.

Homogeneously Pigmented

The homogeneously pigmented process of customizing dentures is accomplished in the dental laboratory either through wet or dry heat curing. The life-like coloring effect is scientifically blended in a gel or a plastic material which is used to process the gums. The unique feature of this method is that the special color particles used for tones have a delayed color-diffusion action which picks up the tones of color in the patient regardless of his predominant coloring. However, if a person has an exceptionally dominant color tone, the technician can manipulate the blend to create the desired arrangement of color tones without sacrificing the overall not-artificial appearance.

Basic camouflage principles of protective coloration were employed in developing these materials. The usual hard outline at the gingival is eliminated and a softened effect is obtained by the use of light colors to offset the normal shade cast by the lips. Diffusion of the colors completely through the material gives it the same depth of coloring in the mouth that may be seen in the surrounding soft tissue. The whites and greys apparent on close inspection in the hand diffuse into highlights and shadows in the mouth. When this blending is accomplished the denture is then "concealed in its own environment" and cannot be detected in the mouth even at a short distance.

The fact that color permeates the entire gum area suggests the denture will have depth of color and natural color tones that cannot fade, wear away, or change if grinding or cutting becomes necessary for a more accurate fit. Neither will any two dentures be exactly alike, assuring your patient of a truly individualized set of false teeth which will have a life-like "at-home" effect in his mouth.

Veneering

The third, or veneering, method may be done by you or the laboratory. A wax veneer, which has average anatomy, is placed in the wax try-in to give the denture its correct anatomical contour. The pigented acrylic veneer is placed at the beginning of the flasking. It conforms to the duplicated wax anatomical veneer and gives the finished denture the natural gum coloring desired.

When you receive the acryclic color veneer, it is sealed in a glass vial to prevent drying. Inside the vial, the veneer is rolled up and attached to a piece of paper which you remove before inserting into the flask. The colors are designed to provide natural color simulation and gum tissue detail over the area from the region of the first molar around to the region of the opposite first molar. It completely covers the visible area from the gingival toward the periphery of the denture. As with the other types, the veneer method produces a finished denture which looks homogeneous in the oral environment but outside the mouth may appear incongruous.

After the completed denture is removed from the flask only a light final buff may be used in order to preserve the natural contour and surface detail which is reproduced by the color veneer. Should the color veneer crack and the color line become stretched due to overpacking, improper trimming, or excessive pressure applied too quickly, the imperfect area may be touched up by applying some of the tones from the tissue-tinting set discussed earlier.

You might want to see and try all three methods before you decide which is best for you. But whether you use the tissue-tinting, homogeneously pigmented, or veneer process for your denture work, you will know you are giving your patients the very latest that dental research has been able to provide.

"YOU SHOULD HAVE HEARD HER CARRY ON WHEN I FILLED HER TOOTH LAST WEEK"

What's New? This!

by Jo Stephens

Roy J. Lindgren, Marshall, Minnesota, received Patent No. 2,696,048 covering an invention to provide an instrument which will serve in the filling of dental cavities of the lower jaw with amalgam, as a carrier of the amalgam, as an initial plugger therefor, and as a complete finishing plugger, so that the dentist may conclude the entire filling operation upon a tooth without changing instruments.

A dental saliva ejector has been patented—No. 2,701,916—by John P. Jarboe, Washington, D. C. This ejector has a resilient flexible perforated tubular portion arranged to fit any size or shape mouth. "A further object consists in detachably connecting a flexible perforated tubular member to the shank of a saliva ejector in such a manner that the tubular member may be positioned comfortably within the mouth and be connected to the shank without interfering with the area being treated by the dentist." The flexible tubular portion of the ejector may be of any length or size and when inserted does not gouge the mouth tissues or cause discomfort.

A universal dental isolator is covered by Patent No. 2,706,334 issued to Bert J. Daigle, Sulphur, La. This invention relates in general to improvements in dental equipment, and more specifically to a universal dental isolator intended primarily for use in conjunction with a dental air abrasive technique. The object of this invention is to provide a universal dental isolator of such a nature that a single isolator may be utilized in the treating of any teeth of a patient's mouth with the air abrasive dental technique. "This isolator may be conveniently placed in a patient's mouth in any desired position to isolate one or more individual teeth, and is provided with vaccum means whereby it not only isolates a tooth to be treated, but also may be utilized for the removal of the particles utilized in the air abrasive technique." This invention also includes an extensible support which carries a bite plate and a tooth isolating frame.

"A further object of this invention is to provide an improved dental dam in the form of a resilient cone for use in combination with a dental isolator frame, the cone being of such a nature it may be easily disposed over the dental isolator frame and used in combination therewith for isolating a single tooth.

"Another object is to provide an improved resilient cone for use in combination with a dental isolator, the cone including an ear construction which is securable to adjacent parts of an isolator frame for the purpose of protecting the exterior of a patient's mouth, the cone being of such construction it may be turned inside out for use on opposite sides of a patient's mouth in combination with the universal dental isolator."

Patent No. 2,705,837, issued to Hans Gerlach, Berlin-Dahlem, Germany, relates to an apparatus having a bore for fitting over a pin to be fixed in the natural root of a tooth. It includes a root pin which consists of a cylindrical upper portion and a slightly tapered lower portion. The latter portion fits accurately into the bed excavated in a natural tooth by means of a precision burr having the same slight taper so that an artificial crown or the like is reliably held in position. The precise fit of the pin, as a rule, makes it unnecessary to employ a root ring.

"Root pins which, with the aid of corresponding special burrs, are made to fit exactly into excavated bores are known, but their objectionable feature is that the portion thereof reaching into the root canal is provided with an offset disc-like thickening for sealing the bore of the root and keeping the cast-on material away from the portion of the pin that is within the canal.

"In practical application it has been found that pins having such a disc-like collar have certain disadvantages which do not appear when a pin according to the invention is used. The disc-like collar of the pin portion extending into the root canal requires different lengths of the bore shaft corresponding to the condition and size of the root canal, so that burrs and pins of different dimensions are needed. Furthermore, pins of this class must be very carefully handled since the depth of the shaft is positively limited by the collar of the burr and cannot be reduced or increased."

According to this new invention, both the root pin and its auxiliary members are provided with a continuous longitudinal groove to secure the pin in the root canal and the part of a denture carried by the pin against torsion. The accessories, as cannulae, etc., attachable to the pin and the auxiliary member are shaped accordingly and possess interior keys which fit into the groove like a tongue. The cannulae may be constructed as impression cannulae for model work or as shell cannulae for casting on a crown structure and baking solid crowns of porcelain or plastics around such shell cannulae.

by Maurice J. Teitelbaum, D.D.S.

How to Be a Successful Dentist

How to Be a Successful Dentist is the title of a book that will never be published but that hasn't stopped us from reviewing it for the readers of Tic Here are the highlights from this rare work that is unavailable at any cost.

(1) To be a successful dentist, the first thing you need is 20-20 vision. You can't change a hundred dollar bill without it. If you don't have 20-20 vision, a pair of glasses usually helps. I say usually, because I have known men who get bleary-eyed after just one glass.

(2) The next thing a dentist needs is an office. Of course, once you have built a successful practice, you can hide in the most inaccessible corner of the sixteenth floor of an office building in the wrong end of town and it won't make any difference—by then you'll probably own the building. But until that happy day, pick out a prominent corner location for your office. Unfortunately, as things now stand, there are only four corners to a city block and therefore corner offices are at a premium. I have spoken to a number of municipal engineers in my own town in an effort to interest them in redesigning the city into hexagonal blocks instead of the outmoded squares. This would add two more corners to each block and be a boon to the dental profession. (The suggestion was made seven months ago and to date the only correspondence I've had from the city has been in the form of a water bill and a plea for the payment of personal taxes.) A decided advantage of the corner location is the view you have of all the potential patients as they pass by your building. Some day rain may drive a few of them into your building and this will be most beneficial, especially if your brother-in-law happens to run the newspaper concession on the ground floor.

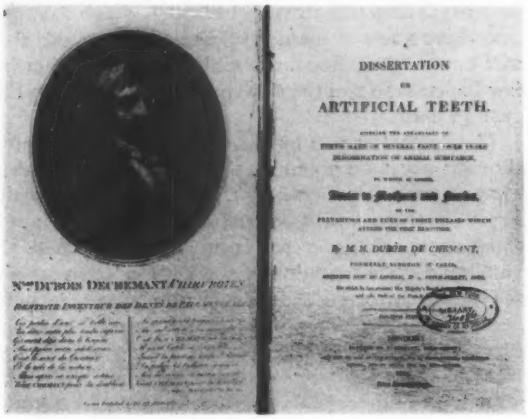
(3) Now that you have selected your office, some thought must be given to the decor. The waiting room is very, very important. For without the waiting room there would be an awful draft in the operating room whenever the front door is opened. If you are a recent graduate, then a few ten-year-old magazines will give the impression that you have been in practice for a good many years. However, avoid any copies of the *Literary Digest* unless you want to go to the trouble of tinting your hair grey. One final word about reading matter: Avoid any controversial material. This can be accomplished by retaining only the covers of the leading magazines and filling them with blank paper. Then your patients will be able to write in all the things they want to read and everyone will be happy.

(4) Your business office should be impressive looking. This is where your contracts are made and the payments are promised. The business office of any successful professional man must have an expensive Swiss wallclock that tells the hour of the day, the week, the year, and when to go out for lunch. You will also need a glass encased combination barometer, pyrometer, and thermometer. This splendid bit of apparatus will enable you to keep the room comfortable and during the racing season will let you know whether the track is wet or dry.

(5) The operating room should be spotlessly clean. To practice dentistry properly it will be helpful if it contains equipment. Get the best equipment and be sure that all your accessories are up-to-date, including your assistant. If your equipment is outdated that's bad enough, but if your assistant has been outdated by every other assistant in the building, you'll never live it down.

(6) Now the all important question is, how to get patients. Without patients you'll be stuck with shelves full of dental supplies and may find it difficult to pay the rent. Some authorities say that the best way to get patients is to socialize. They say you should join organizations and be seen. However, one dentist I know was the Grand Master of his lodge in San Francisco, was president of the Lions Club there, and on the board of directors of the Frisco Rotary Club; yet he never got a single patient from any of those organizations. Maybe the fact that his office was in Providence, Rhode Island, had something to do with it.

Well, sir, I've told you how to become a successful dentist, but if you do get into the higher income bracket and Uncle Sam wants to share your success, don't blame me.



A Pictorial History:

Part X—

Dentistry in 18t

by C[illegible] M.D.

Like so many other things in this world, porcelain teeth owe their invention partly to chance. A French apothecary named Duchateau wore a denture made of the usual hippopotamus ivory. He was annoyed by the discoloration and odor of his denture, which grew worse every day. This was the year 1774. An idea struck him: some inorganic material should be used, since organic matter has so many disadvantages. He lived near Versailles, in the little town of Saint-German-en-Laye, a spot that happened to be very close to the world-famous porcelain manufactory of Sèvres. It is quite possible that this proximity inspired him with the idea of making teeth out of the same material as dishes, cups, and soup tureens, for household utensils come in contact with food and fluids, hot and cold, much as do artificial dentures, and without causing any fetid odor.

There are various stories about his endeavors to produce a porcelain denture. The most plausible version is that he approached a porcelain manufacturer, one of the many in the region, who agreed to reproduce his ivory denture in porcelain. But since no allowance had been made for shrinkage of the porcelain, and neither party was experienced at making artificial dentures, the replica did not fit. Duchateau realized that he must contact an expert; he confided both his idea and his troubles to the well-known Parisian surgeon and dentist, Dubois De Chemant. This fox grabbed Duchateau's ingenious idea, experimented with several substances variously mixed, and finally succeeded in producing porcelain dentures fit for use. Thereupon he unscrupulously pushed aside the true originator and this extremely important invention slipped out of Duchateau's hands. Fifteen years later, in 1789, De Chemant presented his artificial "teeth and sets of teeth of the new composition" to the Royal Academy of Sciences, which entirely approved and said of his invention: ". . . those teeth and sets very nearly imitate nature, as well by their form and colour as by the portions of artificial gums which support them, and to which M. Dubois De Chemant also gives a very great likeness to natural gums. But what merits for them a considerable preference beyond all those which have been composed hitherto, is, that they are of a hard substance, upon which the saliva and the particles of food which remain in the mouth have no effect: whereas the others, made of animal substances, and little resembling natural teeth, are easily spoiled, acquire a dirty colour, and contract a smell as offensive as it is prejudicial to the health."

"In addition to his porcelain teeth, De Chemant devised a new kind of spring . . . ."

in 8th Century – No. 2

by C[illegible] M.D.

In addition to his porcelain teeth, De Chemant devised a new kind of spring: "The whole sets are put in motion by means of springs which are very different from those used heretofore, and which not only separate the parts when the jaws are distended, but also allow the side motions." On the plates in Fauchard's work we saw that the springs used at the time were narrow elastic metal bands, bent in form of a U between the ends of the two dentures so that the latter were automatically pressed against the upper and lower jaws on the opening and closing of the mouth. But since these metal bands were flexible only vertically, the dentures also could move only vertically, "which caused a disagreeable and inconvenient resistance in the different motions of the mouth." De Chemant's newly invented springs for fastening whole sets of teeth were made of "gold of a certain purity, made into wire of the required strength." They were both flexible and solid, having "a rotary motion which artists had not before been able to give them, and there is nothing complicated in their contrivance, for their extreme simplicity enables everybody to be able to fix them."

In June 1791 De Chemant obtained letters patent from King Louis XVI for the exclusive manufacture and sale of his "incorruptible and odourless teeth and dentures of mineral paste" for a period of fifteen years.

He did not enjoy his stolen glory for long in Paris, however. The cheated Duchateau and some of the most eminent Paris dentists, among them Dubois-Foucou, dentist to the King and later to Napoleon, brought a legal action against De Chemant; they charged that he was not the inventor of the porcelain denture and demanded that the letters patent be withdrawn. They lost the lawsuit, but fate intervened. For the people of Paris the Frech Revolution was certainly a more important event than the invention of porcelain teeth. Interest in De Chemant's incorruptible teeth dwindled. He lustily rolled the drums of publicity, but few attended. In an effort to capitalize on his find, he emigrated to England and met with great success. On May 11, 1791, the Patent Office of Great Britain granted a patent for his "composition for making artificial teeth, either single, double, or in rows, or in compleate setts."

Caricaturist Thomas Rowlandson's copperplate "Mineral Teeth."

The famous London caricaturist Thomas Rowlandson (1756-1827) engraved and colored a copperplate entitled *Mineral Teeth*, wherein "Monsier De Charmont from Paris" is represented. A handbill fastened to a wall announces that he "enjois to affix from one tooth to a whole set without pain. Monsieur D. can also affix an artificial Palate or a glass Eye in a manner peculiar to himself he also distills . . ." The Monsier De Charmont whose manifold talents are thus extolled is doubtless the Parisian dentist Dubois De Chemant. This copperplate may be regarded as a realistic satirical take-off on a certain method of dental treatment that was attracting wide attention at the time. Rowlandson was an artist inclined to portray the follies and foibles of his fellowmen; he enjoyed ridiculing the social manners and crudities, the fashionable stupidities of his era. In this cartoon he reduces to absurdity the whole idea of porcelain teeth, applying his powers of keen observation and his talent for pointing up the comic aspects of a situation by exaggeration. This satirical portrayal is at once a valuable contribution to our knowledge of the history of dentistry and an interesting revelation of contemporary opinion of a dental fad. The artist enables us to consider the stylish treatment not with the eyes of the professional dentist but with the eyes of the lay public. Such a caricature is almost a documentary record of contemporary evaluation of a dental achievement.

(Installment XI next month)

Dental Wives:

Upward and Onward

by Kay Lipke

On a public library shelf the other day, a dental wife discovered a book with an arresting title. It was *How to Help Your Husband Get Ahead,* by Mrs. Dale Carnegie.

"This is definitely for me," she thought as she plucked it from the shelf and brought it home with her, eagerly reading it in her spare time. It was an interesting book, there was no doubt of it, filled with stimulating anecdotes about men who had plowed their way straight to the top, aided and abetted tirelessly by alert and stimulating wives.

The first step toward success, as stated by Mrs. Carnegie, was: "Help your husband decide where he is going." Now this was a very sound idea, but of no practical help to Mrs. Dentist. No help at all. Her husband had decided where he was going long before he met her, and had left no stone unturned toward accomplishing his goal of becoming a conscientious dentist. He had planned his professional career with singular thoroughness, and she was sure he not only did not need her bustling assistance but would resent it heartily.

The dental wife read on and on, hunting for some idea which would help her to leap into the picture and be a dynamic inspiration to her husband. After all, being a little homemaker was good enough after a fashion, but she dreamed of being an influence with a capital "I." It sounded so good on paper.

She read about wives who sold their engagement rings to help their husbands in business, working overtime to spur their men upward and onward until they reached that mystical peak called "The Top."

One suggestion for helping a husband was: "Sell your husband on the value of enthusiasm." That didn't help much either, for her dental husband's enthusiasm for his profession was now well up toward the boiling point. He left the house early and came home late and he talked dentistry by the hour in the evening. No, he needed no lesson in enthusiasm.

She was beginning to think the book was not for her after all when, toward the end of the volume, she began to hit pay dirt. The final chapters were filled with good, common sense ideas which she could very well use in her everyday life.

Under the heading "How to Conserve His Health and His Wealth," she found these crisp sub-titles: "Learn to live on his income." "Guard his health as you do your own." "Don't forget to watch his weight." "See that he gets regular medical check-ups." "Refrain from driving him too hard." "See that he gets enough rest." "Keep his home life happy."

She approved of the last three statements especially. After all, a wife did not need to sell her engagement ring to prove her love for her husband, but she could surrender a lot of her cherished plans if they interfered with his rest and well-being. For instance, she could quickly give up that midweek social engagement when her husband came home and stated flatly, "I hope you haven't anything planned for tonight. I'm dead tired and have a terrible day coming up tomorrow."

Then too, most women have a curious urge to "keep up with the Joneses." They have an inner itching unrest to have homes as lovely as their more affluent friends. When mink stoles are in fashion, they want one. They feel they should take in all the popular plays and current movies because their friends go to them and talk about them. It is hard for most women to be independent of the opinions of others. This is purely a feminine disease which a conscientious wife can curb radically if she values her husband's peace of mind and well-being.

She thought of all this, with Mrs. Carnegie's book in her lap, open to the final page on which was a summary of the last chapter, entitled "The Greatest Contribution of All." Under it were these suggestions: "Give him a high standard of loving, expressing affection, being good-humored, being generous of spirit, showing appreciation, being understanding and considerate."

"Most of us try to do all that anyway, just because we love the man," she reflected. Then she decided it really would not hurt to concentrate on it just a little bit more.

KNOCK, KNOCK, IT'S HALLOWEEN

A dentist's daughter must be discreet
When she goes out to "trick or treat,"
So daughter mine, I hate to nag,
But don't go as a toothless hag.

N. L. Talbert

Operative Dentistry:

Direct Filling Acrylic Resin

by Arthur H. Levine, D.D.S.
(The final installment in a series)

When the dental practitioner heard that modern science was about to provide him with a so-called acrylic filling that could be mixed, inserted, and finished in one visit, he was elated. Experience with acrylic denture materials had already convinced him that the material was here to stay. It was no wonder, therefore, that many members of the profession who were usually cautious with new methods and new materials accepted the new filling material almost without reservation.

Another factor that played a part in the ready acceptance of the newcomer was that it was supplying a great need. For years dentists had accepted the silicate filling as a necessary evil. Here, at last, was something to replace it; something that was beautiful and permanent.

Although the self-curing resin had its birth about ten years ago, it has been used widely only for the past three or four years. During that time an accumulation of experience from all parts of the country has, at last, provided a means of appraising the new material. The verdict is not good.

Most of the complaints fall into three major indictments. First is the harmful effect on the dental pulp. Although the manufacturers were enthusiastic in presenting the new material, their claims did not conform to later clinical evidence. They asserted that it was not harmful to the pulp and that the change in temperature was not critical. One manufacturer stated that it was less irritating than a silicate filling.

Pulp Irritation

But in actual practice this is not the case. More and more practitioners are reporting pulp irritation even in cavities of average depth. Doctor Louis I. Grossman made a study of this problem. He states[1] "This study was undertaken with the object of determining the incidence of pulp death following the insertion of self-curing acrylic resin fillings. As a control, the incidence of pulp deaths following the insertion of silicate fillings for the same period of time was used. It was found that there were approximately four times as many pulp deaths after self-curing resin fillings were inserted as after silicate fillings were used. The cause of these pulp deaths has not been determined, but several possible causes have been considered. When a zinc phosphate cement base was used, neither pulp irritation nor pulp death was observed, regardless of whether the filling material was acrylic resin or silicate. It is therefore recommended that a cement base be used in all cases where self-curing resin is to be used."

From Europe came another study of five different direct filling resins. The findings were as follows:[2] (1) All the filling materials tested caused pathologic changes in the pulp tissue when placed directly in contact with the dentin in cavities of usual depth. (2) The assumption that these changes usually resolve and that the pulp will survive was not sustained. (3) An irreversible chronic pulpitis may develop which would result in partial and total necrosis of the pulp. (4) There appeared to be no difference in the properties of the various brands of resin so far as the effect on the pulp was concerned. (5) Because of their chemical and physical limitations, the direct filling resins of today appear not to meet the requirements of modern dentistry."

Not all authorities, however, agree that the resin filling is harmful to the pulp. Some claim that in those cases in which the pulp died an exposure must have existed before the filling was placed. Doctor Herbert D. Coy, speaking for the work done at the Medical College of Virginia, School of Dentistry, states:[3] "Of the 1200 acrylic restorations inserted since 1949, there have been only ten teeth with pulpal involvement in which resin fillings had been inserted. There may, of course, have been other instances of pulp involvement in teeth of patients who did not return to the clinic; but, nevertheless, there is sufficient evidence to show that no serious pulpal reaction can be ascribed to the direct resin filling."

Looseness or Decay

The second major indictment against the direct resin filling is that it becomes loose easily and encourages decay. One salient feature of the silicate filling, despite its other faults, is its ability to inhibit decay. No such claim can be made for this filling material. Many operators who accepted the material happily in the beginning have turned away from it

because of the number of fillings that had to be replaced because of looseness or decay or both.

It could be that the trouble lies with faulty technique. Unlike a poor amalgam or silicate filling which may perform something of a service for a while, a resin filling improperly handled will fail immediately. The material must be handled with great care and exactly as the manufacturer recommends. Too many men are in the "silicate mood" and don't realize that this calls for a new technique. If a direct resin filling is treated like a silicate it is doomed to failure.

Color Stability

The third major indictment against the material is that it lacks color stability. Since this has always been one of the disadvantages of the silicate filling, it was easy for the profession to receive this new restorative material which promised to hold its color. The manufacturers declared that the new material had greater color stability.

But again this has not been the experience of the majority of the men using the material. In all fairness it should be stated that color stability has been improved by the manufacturers. But this does not alter the situation as far as the patient is concerned. The dentist is still in the unfortunate position of having to warn the patient that the color may change.

The following is Doctor A. B. Gabel's appraisal of the direct filling resins: [4] "Clinical and laboratory findings indicate that in their present state acrylic resins are very inferior to other restorative materials used in operative dentistry, particularly where they are subjected to occlusal loading.

"Softness, shrinkage during processing, high thermal coefficient of expansion, low modulous of elasticity and dimensional change are undesirable properties.

"Where the restoration is subjected to loading, the most detrimental of the properties is the low modulous of elasticity. This results in an excessive distortion of the restoration under load which tends to pull it away from the tooth in some areas and to make it slide over the tooth in others. As a result, the tension and shear are likely to cause failure of the restoration."

But now that the disadvantages of the direct filling resins have been described, it might be well to list some of the good points and determine just where, in the list of restorative materials, it belongs.

Advantages Listed

One advantage of the filling that no one questions is the fact that it will not dissolve or wash out. It is about completely impervious to the mouth fluids. This, alone, is a considerable improvement over the silicate. Also, the material is translucent. Once color stability has been established, it will be a more beautiful restoration than anything that exists today. In addition, the filling is strong in the sense that it will resist chipping and wear. Mouth breathing which seriously affects a silicate filling will do nothing to the resin. With additional development it may well become the first beautiful permanent filling material for the anterior teeth in the history of dentistry.

Technique Is Important

The technique employed with the resin filling is quite different from that of the silicate and must be followed rigidly without any short cuts or departures. There is no doubt that many of the failures reported are directly due to faulty technique.

Preparation calls for greater retention. The material has no adhesiveness and hence must be more securely locked in. This means the undercuts and dovetails must be deeper and larger. The manufacturers recommend the use of the material only in class III and V cavities. In any other situation the operator is on his own. Since the material does not bear up well under biting stress, the manufacturers

feel it is wiser to avoid using it in class I, II, or IV cavities.

Smaller fillings are more difficult to handle than larger ones. At least they become loose more easily. Square, box-like preparations are more successful than long thin, narrow ones. No bevel on the margins. No feather edges. Undercuts are best made with round burs.

Phenol cannot be used to sterilize the cavity because it reacts with the filling material. A cement base should be used under every filling. Phenol can be used before the cement base is placed. But then the cavity should be wiped with alcohol before inserting the resin.

Cavity liners are useless and should not be used. Zinc oxide and eugenol cannot be used either. Some men resent having to carry a preparation deeper just to make room for a cement base. But if the cavity is of average depth all that is needed is a thin, very running layer of cement. If the area is small, the fine point of an explorer is ideal for carrying a drop of cement. But the cement must be thin. It will harden and provide adequate protection. Strength of cement is not important in this situation.

The cavity should be filled to excess in either the brush or strip technique. If a strip is used, it should be held motionless for five minutes. Finishing should be delayed for fifteen minutes. Some authorities feel that it is wiser to delay finishing for twenty-four hours. The important point is that it should not be touched until it is really set. Too early manipulation will definitely loosen the filling.

Direct filling resins sometimes trench at the margins. This depression around the filling becomes discolored and invites decay. It is well, therefore, to have a slight overlap of the filling.

In the brush technique, which consists of keeping the interior of the cavity moist with the liquid part of the filling while carrying dry particles of the powder to it on the tip of the brush, it is important to keep the particles small. The filling should always look moist during the entire process. If too large a particle of the dry powder is carried to the filling it may dry it out too much and the fiilling will lose its moist look. If this happens, a drop of liquid should be added with the brush.

A good mix is like soft dough with a wet, shining surface. If it is pressed with an instrument it will hold that shape. It will not run together. Strips should be those recommended by the manufacturer. Celluloid strips used with silicates cannot be used. All excess should be removed while the filling is still soft. This material cannot be chipped away like a silicate filling. Pulling on a piece of excess will loosen the whole filling.

To summarize, the direct filling acrylic resins have a definite place in operative dentistry. Any material that can match the color of the anterior teeth without washing out is not to be tossed away lightly. More work has to be done from the manufacturer's end before the filling material can be termed satisfactory. But it shows great promise and the profession should be patient.

BIBLIOGRAPHY

[1] Grossman, Louis I., "Pulp Reaction to the Insertion of Self-curing Acrylic Resin Filling Materials," *J.A.D.A.* 46:265 (March) 1953.

[2] Nygaard-Ostby, B., "Pulp Reactions to Direct Filling Resins," *J.A.D.A.* 50:7 (Jan.) 1955.

[3] Coy, Herbert D., "An Evaluation of Acrylic Resin as a Restorative Material," *J.A.D.A.* 48:266 (March) 1954.

[4] Gabel, A. B., *American Textbook of Operative Dentistry*, ed. 9, Philadelphia: Lea and Febiger, 1954.

BACK-FIRE

The modern trend to "do it yourself,"
Should give a dentist pause,
With patients working on their teeth,
'Twill surely help his cause.
On rocky dentures some will try,
Those cunning little cushions,
With which they'll do no better than
A peace pact with the Russians.
Faint hearted? NO. They'll sprinkle on
Some Doctor Doody's powder,
For they have met a friend who sang
It's praises even louder.
No good? Well there's that kit wherewith,
You can reline your dentures.
No denying it my friend,
Ads are full of ventures.
The procedure's complicated but
That doesn't hold 'em back.
But when they try to wear them, Boy
Are they on the rack!
This last achievement does the trick.
With mouth and gums so sore
He only hopes that he can make
It to the dentist's door!

Ethel Willis Hewitt

FOR LIVING

The Army Dental Corps

by Joseph George Strack

(The first of four installments)

The oral hygiene habits of the people of the United States are improving on a large scale, which means that the dental health of the nation is advancing in substantial measure.

One of the major factors responsible for this important development is the dental programs of the armed forces. And one of the most extensive of these health services is that operated by the Dental Corps of the United States Army.

At no period in peacetime history has there been such a far-reaching, effective, high-quality program of adult dental care in operation in a military or civilian economy as that manned by the approximately 2,400 dentists and 4,429[1] auxiliary personnel of the Army Dental Corps. These auxiliary personnel are classified as follows: Military—dental assistants, 2,000; laboratory technicians, 702; other personnel, 350 (drivers, clerk-typists, and others); civilian—assistants, 723; hygienists, 131; laboratory technicians, 213; other, 310 (secretaries, clerk-typists, file clerks). The Dental Corps provides a wide variety of dental treatment to many of the 1,200,000 officers and troops (1954) of the Army. A few statistics will indicate the scope and impact of this tremendous program. The percentages of soldiers in each dental classification below are for a typical month:

Class I	37 per cent require no treatment
Class II	35.6 per cent require routine treatment (mostly filling operations)
Class III	23.3 per cent require immediate care including extractions
Class IV	3.5 per cent require essential prosthetic replacement
Class V	0.6 per cent require treatment of an emergency nature

These significant figures show that two-thirds of all troops receive dental treatment, probably the largest dental caseload in the world. Despite the great amount of treatment given, the overall number of troops requiring dental care remains at this high level of nearly 70 per cent because of the turnover in the Army: the loss of individuals whose dental treatment is completed is offset by the gain of new troops who need treatment.

Thus millions of young men and women, treated as dental patients in the order of Class V, IV, III, II and I, leave the service materially improved in dental health. Furthermore, sound oral hygiene habits have been inculcated in many of them—habits which they will directly or indirectly pass on to members of their families and others. Among these young people are many who previously had received little or no dental care. With the possible exception of the dental programs carried on in the public school systems of the nation, no other dental service reaches so many individuals; certainly the United States Army has the most extensive adult-patient dental

[1] Based on average number of personnel in each category for the year 1954.

FIELD ORGANIZATIONS

Various combat units have dental officers assigned on the basis of approximately 1 per 1,000 troops.

Army dental organizations that provide dental care for troops not having their own assigned dental officers are as follows:

Team K1 Dental Operating Detachment
1 officer, 1 enlisted man
Normally assigned on the basis of 1 team per 1,000 troops in isolated areas.

Team KJ Dental Service Detachment
15 officers, 23 enlisted men
Assigned on the basis of 1 detachment for 15,000 non-divisional troops in a Theater of Operation.

Team KK Dental Prosthetic Detachment, Mobile
1 officer, 3 technicians
Assigned on the basis of 1 team per 30,000 troops in the Theater of Operations.

Team KL Dental Prosthetic Detachment, Fixed
2 officers, 6 enlisted men
Provides dental laboratory facilities in a Communications Zone.

Team KM Dental Clinic, Fixed
26 officers, 42 enlisted men
Assigned to a Theater Communications Zone where large concentrations of troops require such facilities.

These teams are not used to duplicate the dental services otherwise provided for troops in a Theater of Operations but are used in figuring the overall theater requirement. In other words, when the troop strength of the whole theater is known and the number of dental officers in divisions, numbered hospitals, and so forth are known, these teams are then assigned to meet the needs of the many small units not otherwise covered.

service in the country. The United States dentist is doing well by the United States soldier in scope and content, in quantity and quality, of service.

The overall authorization of dental officers in the Army is approximately 2 officers for each 1,000 military strength—a ratio that some critics believe is too high (See footnote 2, Page Sixteen) as follows:

Fixed installations in the United States (posts, camps, and stations) 1.7 officers per 1,000 troops

Other stations (where newly inducted men are undergoing basic training) 2.7 dental officers

Receiving office of William Beaumont Army Hospital at Fort Bliss, Texas.

Aerial view of William Beaumont Army Hospital.

MILITARY DENTISTS: sitting, Col. Henry R. Sydenham, DC, Chief, Dental Services Branch, Dental Division, Office of the Surgeon General; Maj. Gen. Oscar P. Snyder, DC, Assistant to The Surgeon General and Chief of the Army Dental Corps; Colonel George F. Jeffcott, DC, Assistant Chief, Dental Division, Office of the Surgeon General; standing, Capt. Harry T. Winkler, MSC, Administrative Officer, Dental Division, Office of the Surgeon General; Lt. Col. William V. Hill, DC, Chief, Dental Standards Branch, Dental Division, Office of the Surgeon General; Lt. Col. Edward P. Quarantillo, DC, Assistant Chief, Dental Services Branch, Dental Division, Office of the Surgeon General; and Maj. Robert W. Hobson, DC, Chief, Dental Research Branch, Research and Development Division, Office of the Surgeon General.

per 1,000 trainees and 1.7 for each 1,000 non-trainees.

Enlisted and civilian support personnel, laboratory technicians, chair assistants, hygienists, and clerks are ordinarily assigned on the basis of approximately 1.5 for each dental officer.

Combat units (see table "Army Dental Corps Field Organizations")

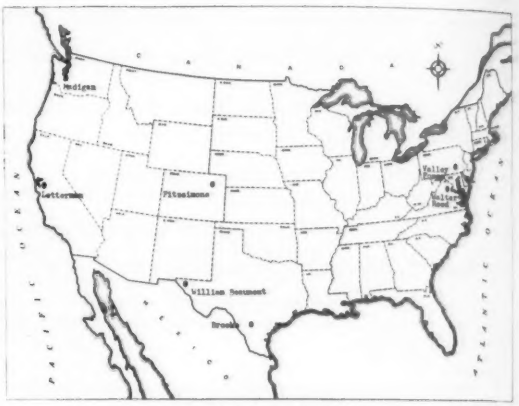
Army hospitals — Brooke Army Hospital, Fitzsimons Army Hospital, Letterman Army Hospital, Madigan Army Hospital, Valley Forge Army Hospital, Walter Reed Army Hospital, and William Beaumont Hospital—are staffed with dental officers on the basis of the mission of the hospital; that is, the in-patient load, the out-patient load, and whether or not the hospital has a teaching mission, such as postgraduate courses and dental internships and residency programs.

Such a far-flung network of dental services requires a constant supply of trained personnel. In next month's installment in this series we will learn about the Dental Corps' postgraduate training programs for dental officers.

---

[2] Writing in the *Sunday New York Times*, on July 3, 1955, Doctor Howard Rusk, Associate Editor of *The Times*, analysed the so-called Doctor Draft Act. In part he said:

This legislation permits compulsory conscription of physicians, dentists, veterinarians and allied health specialists in the event they do not voluntarily accept commissions as officers of the armed forces or the Public Health Service. The use of the law so far has been restricted to physicians and dentists and a limited number of veterinarians.



Army hospitals in the United States.

Of the 30,000 physicians, dentists and veterinarians who have served in the armed forces under the law, all but seventy-two entered active duty as commissioned officers. Of the seventy-two inducted as enlisted draftees, approximately half were commissioned a short time thereafter. The remainder either refused to accept commissions or were denied commissions on security grounds.

. . . . .

The dentist-troop strength ratio, which is authorized at 2 to 1,000, increased slightly, however, from approximately 1.5 to 1.9. The over-all size of the military establishment has been somewhat reduced, and there has been a substantial increase in young medical and dental school graduates subject to military service under the basic draft act.

Because of these developments, many people opposed extension of the admittedly discriminatory act as unnecessary at this time. Others, including the American Medical Association and American Dental Association, also questioned the justice and priority of such legislation when a substantial portion of the professional men forced into military service by it were spending a major portion of their time in the care of military dependents and civilian personnel.

The Department of Defense and certain Congressional leaders insisted the law was essential both to meet basic manpower needs for medical and dental personnel and to insure the armed forces of an adequate future supply of medical specialists. A minimum of 300 new graduates are being deferred each year to undertake advanced training, after which they will enter the armed services as specialists.

. . . . . .

The situation with respect to dentists is not as complicated, as the dental needs of the armed forces can be met with a ratio of 2 dentists for every 1,000 service men. Of the total of 4,017 dentists required in the next two years, 3,500 will come from new graduates subject to service under the basic draft law. The remaining 525 will come from dentists in Priority III, but even this small number can be met only by calling dentists over 40.

In testimony on the need for the dentists' ratio the armed forces called attention to a recent Army Dental Service survey of 10,000 inductees. In this study it was found that the average inductee required 5 fillings, 6 per cent required upper dentures, 11 per cent lower dentures, 40 per cent bridgework, and 45 per cent some type of dental and oral prophylaxis.

There are two major changes in the new legislation. First the maximum age of men liable for service under it has been reduced from 51 to 46. Second, men over 35 who have previously applied for commissions and been turned down on grounds of physical disability are no longer subject to the law.

In extending the "doctor draft" for another two years, Congress has admitted the law is undesirable and discriminatory but still essential. It points up the fact that we are not producing sufficient medical and dental personnel to meet the increasing demands for health services of our rapidly growing population.

7 Reasons why YOU will like TICONIUM

LOW-HEAT — A low-melting alloy electrically cast into a relatively cool mold produces fine-grains in the structure of the final casting.

TICONIUM CASES FIT — Plaster-bound investment, hydrocolloid impression material and a rigidly controlled technique produce fine-grain, accurate cases.

SOLDERABILITY — Work is handled easier; cases can be re-finished better; warpage of original casting is minimized.

STRONGER CLASPS — Ticonium clasps have better adjustment and longer life.

BETTER PHYSICAL PROPERTIES — Tests prove the greater resiliency of fine-grain, low-heat Ticonium.

ELECTRIC MELTING — Ticonium is melted uniformly. The human element is minimized by use of an electric casting machine.

PRESCRIBED FOR SURGERY — Ticonium #25 has been tested and used successfully in surgery for many years.

TICONIUM
413 No. Pearl St., Albany 1, N. Y.

tic

413 North Pearl Street, Albany 1, N. Y.

Form 3547 Requested

SEC. 34.66 P.L.&R.
U. S. Postage
PAID
ALBANY, N.Y.
Permit No. 1648

UNIVERSITY OF MICHIGAN
SCHOOL OF DENTISTRY
ANN ARBOR MICHIGAN

On our October TIC cover is reproduced the fly leaf of an early dental monograph. That publication is representative of the pioneering efforts of dental educators who have labored so devotedly and fruitfully to lay the foundation of dentistry.

Typical of this early leadership in a new field is Pierre Fauchard, Surgeon Dentist of Paris, who is the author of the text illustrated on our cover. He is the prototype of countless men who have done so much to build the great health science that dentistry has become today.